

§ 160.174-23

(incorporated by reference, see § 160.174-3).

(g) *Test for oil resistance.* After all its apertures have been sealed, a thermal protective aid is immersed under a 100 mm head of diesel oil, grade no. 2-D as defined in ASTM D 975 (incorporated by reference, see § 160.174-3), for 24 hours. The surface oil is then wiped off and a sample of the material from the aid is again tested in accordance with the procedures in ASTM C 177 or ASTM C 518 (incorporated by reference, see § 160.174-3). The material must still have a thermal conductivity of not more than 0.25 W/(m-°K).

(h) *Seam strength.* The strength of each different type of seam used in a thermal protective aid must be tested under the following conditions and procedures.

(1) *Test equipment.* The following equipment must be used in this test:

(i) A chamber in which air temperature can be kept at 25 °C (73.4 °F) ±2 °C (1.8 °F) and in which relative humidity can be kept at 50% ±5%.

(ii) A device to apply tension to the seam by means of a pair of top jaws and a pair of bottom jaws. Each set of jaws must grip the material on both sides so that it does not slip when the load is applied. Each front jaw must be 25 mm (1 inch) wide by 25 mm (1 inch) long. The distance between the jaws before the load is applied must be 75mm (3 inches).

(2) *Test samples.* Each test sample consists of two pieces of the material from which the thermal protective aid is constructed, each of which is 100 mm (4 inches) square. The two pieces are joined by a seam as shown in figure 160.171-17(m)(3). For each type of seam, 5 samples are required. Each sample may be cut from a thermal protective aid or may be prepared specifically for this test. One type of seam is distinguished from another by the type and size of stitch or other joining method used (including orientation of warp and fill, if any) and by the type and thickness of the materials joined at the seam.

(3) *Test procedure.* Each sample is conditioned for at least 40 hours at 23 °C±2 °C and 50% ±5% relative humidity. Immediately after conditioning, each sample is mounted individually in the

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tension device as shown in figure 160.171-17(m)(3). The jaws are separated at a rate of 5 mm/second (12 in/minute). The maximum force to achieve rupture is recorded. The average force at rupture must be at least 225 Newtons (50 lb).

(i) *Tear resistance.* The tear resistance of the material from which a thermal protective aid is constructed must be determined by the method described in ASTM D 1004 (incorporated by reference, see § 160.174-3). If more than one material is used, each material must be tested. If varying thicknesses of a material are used in the aid, samples representing the thinnest portion of the material must be tested. If multiple layers of a material are used in the aid, samples representing the layer on the exterior of the aid must be tested. Any material that is a composite formed of two or more materials bonded together is considered to be a single material. The average tearing strength of each material must be at least 45 Newtons (10 lb).

[CGD 84-069b, 51 FR 19343, May 29, 1986, as amended by CGD 84-069a, 52 FR 1197, Jan. 12, 1987; USCG-2000-7790, 65 FR 58464, Sept. 29, 2000]

§ 160.174-23 Marking.

(a) Each thermal protective aid must be marked with the words "Thermal Protective Aid," the name of the manufacturer, the model, the date of manufacture or a lot number from which the date of manufacture may be determined, and the Coast Guard approval number.

(b) Each storage case must be marked with the words "Thermal Protective Aid" or the thermal protective aid must have a similar marking which is visible through a transparent storage case.

§ 160.174-25 Production testing.

(a) Thermal protective aid production testing is conducted under the procedures in this section and subpart 159.007 of this chapter.

(b) One out of every 100 thermal protective aids produced must be given a complete visual examination. The sample must be selected at random from a production lot of 100 thermal protective aids and examined by or under the